Laboratory Notebook Format for General Chemistry II Labs

Your laboratory notebook is a very important document that represents a permanent record of your laboratory experiments. A properly prepared notebook must be legible *and understandable* by both you and anyone else who looks at it. Accordingly, a trained chemist should be able to reproduce your experiment by simply following your laboratory notebook records and descriptions.

1. Reserve the first two pages of your notebook (in addition to any space provided on the cover) for a "Table of Contents." Keep it current with the experiment number, title, date, and page location of each experiment. Update frequently.
2. All lab data must be entered directly into the notebook in non-erasable ink– ***not recorded on lab report sheets (if available) or additional pieces of paper.*** Remember, one can always reorganize the notebook data– but without the data permanently recorded to begin with, this may prove impossible.
3. Units must be included with numerical entries and correct significant figures must always be used.
4. Corrections must be made by putting a **single line** through the error and the correct value inserted above or after the error. Never write over the top of an error or try to make the error unreadable. 'White-out' should never be used.
5. Each experiment entry must be labeled sections clearly and include the following:
   1. **Title, Date, Names** (all involved in that experiment)
      - Appropriately completed notebook header
   2. **Objectives**
      - Concise statement(s) describing the specific technique(s) to be employed and the specific purpose(s) of the experiment(s)
      - Equations which must be used for data analysis can be described here, if any.
      - In the event of performing a chemical reaction, illustrate *major* chemical reactions pertinent to the laboratory exercise.
   3. **Chemical Reagents Information & MSDS**
      - Show the chemical structures for *major* reagents used during the exercise.
      - Search and summarize chemical hazards (MSDS) information as a list or in a table.
      - Be sure to include a list of each reagent molecular formula, molecular weights, and physical data (i.e. boiling points, melting points, density, etc.).
   4. **Procedures**
      - Do not reiterate the procedure from the text, but record the procedure, *in brief*, so that a chemist could look at this section of your notebook and understand how the data was obtained.
      - The procedure should reflect what was done DURING the lab experiment. In other words, *procedures must be updated* during *the laboratory exercise in order to ensure that everything you did and observed is accurately reflected.*
   5. **Observations and Data, Calculated Results** (in tables, or list whichever more appropriate)**, and Sample Calculations** (if any)
      - Neatly record significant observations
      - Neatly record ALL data in clearly labeled tables; all data should be descriptively labeled as to what was done with the chemical(s), concentration(s), mixture(s), unknown(s), etc, and what techniques were performed (with words or simple phases).
      - Use proper significant figures and units for measurements.
   6. **Result/Discussion (Narrative)**
      - Describe obtained data and results (quantitative and qualitative).
      - To the best of your ability interpret the data obtained in the lab, and draw appropriate conclusions. Discuss the results, indicating your theoretical understanding. You may use extra observations to give greater reason to derive the final results.
      - As best you can, identify the sources of error and how they affected both the data and the conclusion.
   7. **Signature and Date**
      - At the end of each experiment, sign your name and date.